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MOTOROLA, INC.
1303 EAST ALGONQUIN ROAD
IL01/3RD
SCHAUMBURG, IL 60196

EXAMINER

AJIBADE AKONAI, OLUMIDE

ART UNIT PAPER NUMBER

2686

DATE MAILED: 01/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--|--------------------------------------|--|
| Office Action Summary | Application No. 10/535,143 | Applicant(s) DOLGOV ET AL. | |
| | Examiner Olumide T. Ajibade-Akonai | Art Unit 2686 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _____ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>05/17/2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: Applicant refers to "SDR 220" in page 16, line 15 of the specification. There is no SDR labeled as "SDR 220" in figure as indicated on page 16, lines 15-24 in the specification. Applicant should clarify which of the SDRs is being referred to as "SDR 220" in fig 3.

Applicant refers to "MS 376" on page 16, lines 27-29 as being connected to a computing terminal 380, 382. There is no MS labeled as "MS 376" in figure 3. Applicant should clarify which of the MSs is being referred to as "MS 376" in figure 3. Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-4 and 7-14 are rejected under 35 U.S.C. 102(e) as being anticipated by **Li et al WO 2004/047380 (hereinafter Li)**.

Regarding **claim 1**, Li discloses a wireless zone-based communication system (all-IP RAN 500, see fig. 5A, p.20, lines 30-31), comprising a plurality of zones (areas serviced by, RN.a, and RN.b, see fig. 5A, p.21, lines 5-6) being served with short data

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capabilities by a plurality of short data routers (routers 506a, 506b, and 506c, see fig. 5A, p.21, lines 1-4), wherein the plurality of short data routers are operably coupled to a plurality of zone controllers (RN.a, RN.b, see fig. 5A, p.21, lines 5-6), the wireless zone-based communication system being characterised by: at least one zone controller of said plurality of zone controllers being operable to transmit a multicast message (HARDP_REQ(RN.a,RN.b,HARG.ab) message 565 and 570, see fig. 5B, p.22, lines 17-28) to a plurality of said short data routers (506a, 506b, 506c, 506, 507, see fig. 5B, p.22, lines 17-28) such that at least one short data router of the plurality of said short data routers is operable to generate or update information (updating routing table 460 and 465, see fig. 4B, p.18, lines 17-22) relating to mobile communication units (see figs. 5A and 5B, p.22, lines 30-31 and p.23, lines 1-12) that are operational in the at least one zone that the short data router serves (see figs. 5A and 5B, p.22, lines 30-31 and p.23, lines 1-12).

Regarding **claim 2**, as applied to claim 1, Li further discloses wherein the plurality of said short data routers (routers 506a, 506b, and 506c, see fig. 5A, p.21, lines 1-4) are operable to generate or update mobility information relating to said mobile communication units (updating routing table 460 and 465, see fig. 4B, p.18, lines 17-22).

Regarding **claim 3**, as applied to claim 1, Li further discloses wherein the plurality of said short data routers (506a, 506b, 506c, 506, 507, see fig. 5B, p.22, lines 17-28) are operable to generate or update information relating to said mobile communication units that are operational in the at least one zone (updating routing table

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460 and 465, see fig. 4B, p.18, lines 17-22) that the plurality of said short data routers serve as at least one of primary, secondary standby and sharing short data routers (506a, 506b, 506c, 506, 507, see fig. 5B, p.22, lines 17-28).

Regarding **claim 4**, as applied to claim 1, Li further discloses wherein the at least one zone controller (RN.a, RN.b, see fig. 5A, p.21, lines 5-6) is operable to transmit a multicast message (HARDP_REQ(RN.a,RN.b,HARG.ab) message 565 and 570, see fig. 5B, p.22, lines 17-28) to a multicast group address identifying a group joined by said at least one short data router (routers 506a, 506b, and 506c, see fig. 5A, p.21, lines 1-4).

Regarding **claim 7**, as applied to claim 1, Li further discloses wherein said multicast message (HARDP_REQ(RN.a,RN.b,HARG.ab) message 565 and 570, see fig. 5B, p.22, lines 17-28) comprises an Internet Protocol IP mobility message (IP address pair is distributed to all the routers in RAN 400, see fig. 4A and 4B, p.18, lines 6-10) to maintain synchronised IP address records of mobile communication units operating in the wireless zone-based communication system (See p.18, lines 6-22).

Regarding **claim 8**, as applied to claim 1, Li further discloses wherein said communication system is a trunked radio system (all-IP RAN 500, see figs. 4A and 5A, p.17, lines 18 and p.20, lines 30-31).

Regarding **claim 9**, as applied to claim 8, Li further discloses wherein said communication system is operable in accordance with TETRA standard procedures (all-IP RAN 500, see figs. 4A and 5A, p.17, lines 18 and p.20, lines 30-31).

Regarding **claim 10**, Li discloses a method for improving redundancy provision in a wireless zone-based communication system, comprising a plurality of zones being served with short data capabilities by a plurality of short data routers, the method being characterised by the steps of: transmitting a multicast message (HARDP_REQ(RN.a,RN.b,HARG.ab) message 565 and 570, see fig. 5B, p.22, lines 17-28) from a zone controller (RN.a, RN.b, see fig. 5A, p.21, lines 5-6) to a plurality of short data routers (506a, 506b, 506c, 506, 507, see fig. 5B, p.22, lines 17-28); receiving said multicast message at one of said plurality of short data routers (see fig. 5B, p.22, lines 17-28); and generating, by said short data router, at least one mobility databases (updating routing table 460 and 465, see fig. 4B, p.18, lines 17-22) for mobile units that are operational in the one or more zones served by said short data router (see figs. 5A and 5B, p.22, lines 30-31 and p.23, lines 1-12).

Regarding **claim 11**, as applied to claim 10, Li further wherein the step of generating one or more mobility databases (updating routing table 460 and 465, see fig. 4B, p.18, lines 17-22) is performed by said short data router serving as at least one of a primary, a secondary standby and a load sharing short data router (routers 506a, 506b, and 506c, see fig. 4A, 4B and 5A, p.18, lines 13-22 and p.21, lines 1-4).

Regarding **claim 12**, as applied to claim 10, Li further discloses wherein the step of transmitting includes transmitting a multicast message (HARDP_REQ(RN.a,RN.b,HARG.ab) message 565 and 570, see fig. 5B, p.22, lines 17-28) to a multicast group address identifying a group joined by said at least one short data router (routers 506a, 506b, and 506c, see fig. 5A, p.21, lines 1-4).

Regarding **claim 13**, as applied to claim 1, Li further discloses a zone controller adapted (RN.a, RN.b, see fig. 5A, p.21, lines 5-6) to transmit a multicast message (HARDP_REQ(RN.a,RN.b,HARG.ab) message 565 and 570, see fig. 5B, p.22, lines 17-28) to a plurality of said short data routers (routers 506a, 506b, and 506c, see fig. 5A, p.21, lines 1-4).

Regarding **claim 14**, as applied to claim 1, Li further discloses a short data router (routers 506a, 506b, and 506c, see fig. 5A, p.21, lines 1-4) adapted to receive a multicast message (HARDP_REQ(RN.a,RN.b,HARG.ab) message 565 and 570, see fig. 5B, p.22, lines 17-28) from a zone controller (RN.a, RN.b, see fig. 5A, p.21, lines 5-6) in a communication system (all-IP RAN 500, see fig. 5A, p.20, lines 30-31).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 5 and 6 rejected under 35 U.S.C. 103(a) as being unpatentable over **Li et al WO 2004/047380 (hereinafter Li)** in view of **Ala-Lukko 20040005881**.

Regarding **claim 5**, as applied to claim 1, Li discloses the claimed invention except wherein the at least one short data router is operable to utilise a location query mechanism to minimise inaccuracies in the multicast message.

In the same field of endeavor, Ala-Lukko teaches wherein the at least one short data router (SMS-C, see fig. 3, p.4, [0040]) is operable to utilise a location query

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mechanism (send routing information, SRI, see fig. 3, p.4, [0040]) to minimise inaccuracies in the multicast message.

It would therefore have been obvious to combine the teaching of Ala-Lukko with Li for the benefit of controlling a short message service in a mobile communications system.

Regarding **claim 6**, as applied to claim 5, the combination of Li and Ala-Lukko disclose the claimed invention.

Li fails to disclose wherein the location query mechanism includes said at least one short data router being operable to query directly at least one of a zone controller's home location register and a visitor location register to obtain mobile unit mobility information when inaccurate mobility information has been received in the multicast message.

In the same field of endeavor, Ala-Lukko teaches wherein the location query mechanism includes said at least one short data router (SMS-C, see fig. 3, p.4, [0040]) being operable to query directly (send routing information, SRI, see fig. 3, p.4, [0040]) at least one of a zone controller's home location register (HLR see fig. 3, p.4, [0040]) and a visitor location register to obtain mobile unit mobility information when inaccurate mobility information has been received in the multicast message.

It would therefore have been obvious to further modify the combination of Ala-Lukko and Li for the benefit of controlling a short message service in a mobile communications system.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Sato et al (20020106985) discloses a multicast service providing system, multicast service providing method, information distributor, radio terminal, and radio base station.

Choyi et al (20050213545) discloses a micro-mobility network routing system and method.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Olumide T. Ajibade-Akonai whose telephone number is 571-272-6496. The examiner can normally be reached on M-F, 8.30p-5p.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha D. Banks-Harold can be reached on 571-272-7905. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

OA


CHARLES APPIAH
PRIMARY EXAMINER